CUSHMAN NO. 2 HYDROELECTRIC POWER PLANT,
POWERHOUSE
Spanning the North Fork Skokomish River
Hoodsport vicinity
Mason County
Washington

HAER WA-192-C
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PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

FIELD RECORDS

HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
U.S. Department of the Interior
1849 C Street NW
Washington, DC 20240-0001

HISTORIC AMERICAN ENGINEERING RECORD

CUSHMAN NO. 2 HYDROELECTRIC POWER PLANT, POWERHOUSE

HAER No. WA-192-C

Location:	Spanning the North Fork Skokomish River, Mason County, Washington USGS Quad – Hoodsport, Washington (Northern Section) USGS Quad – Skokomish Valley, Washington (Southern Section)
UTM Coordinates:	5346364N 487919E
Legal Description:	T22N. R4W, S26
Construction Date:	1930; 1953
Engineer/Architect:	Tacoma City Light; Powerhouse: J.E. Bonnel & Sons
Builder:	Tacoma City Light Powerhouse: J.E. Bonnel & Sons
Present Owner:	City of Tacoma
Historic Use:	Hydroelectric power production
Present Use:	Hydroelectric power production
Significance:	Cushman Hydroelectric Plant No. 2 is significant as an example of state-of-the-art high-head hydroelectric technology from the late 1920s and early 1930s. It is associated with Tacoma's burgeoning industrial and commercial growth, and with projected demands for electric power beyond the capacity of Cushman No. 1 Power Plant, built in 1926. Additionally, Cushman Plant No. 2 includes an architecturally significant powerhouse, designed on a monumental scale in the Neoclassical style. In 1988, Cushman No. 1 and No. 2 Hydroelectric Power Plant Historic Districts were listed in the National Register of Historic Places.
Report Prepared By:	Mildred T. Andrews and Heather Lee Miller, Historians Historical Research Associates, Inc. 1904 Third Avenue, Suite 240 Seattle, WA, 98101 and John Stamets, Photographer 493 14th Avenue East Seattle, WA 98112
Report Date:	October 26, 2010

Physical Description:

The steel frame, reinforced concrete powerhouse exhibits characteristics of the Neoclassical style. Highlighted by three penstocks that course down the steep hill behind it, the massive building stands prominently above U.S. Highway 101 and Hood Canal. It houses three Allis Chalmers reaction-type Francis turbines and connected generators, along with related equipment. The façade faces the highway immediately to the east.

The building's monumental proportions complement its Neoclassical architectural details on both the exterior and the interior. The formal symmetry of the exterior is organized into distinct horizontal divisions by a pronounced belt course, a bracketed projecting cornice, and a raised parapet. The unpainted, cast-in-place concrete cladding and large, arched, fixed sash steel windows and bifold doors provide a visual and physical link to the building's industrial use (Figure 37, Figure 41, Figure 44). The interior consists of two-part massing, with the single-volume generator floor (main floor) on the east and the multi-floor service spaces on the west. A mezzanine level is located on the east above the generator floor (Figure 42, Figure 43).

Window and door openings feature cast decorative metal surrounds with a delicate floral pattern, providing contrast to the building's monumental scale and contributing to its classical detailing. Large, glazed, high-bay equipment doors are located at the north and south elevations. Painted steel clerestory windows with operable sections are in the saw tooth monitor roof above the control room. The original terrazzo flooring is largely intact, although portions of it were destroyed during the cleanup following the 1999 landslide (Figure 49).

Generator Units (1930; 1953)

The major equipment of the Cushman No. 2 Powerhouse includes two Allis Chalmers reaction-type Francis turbines directly connected to Allis Chalmers generators, installed in 1930. As per original plans, there was space for a third unit, which was installed and placed in service on March 12, 1953. The original main exciters and pilot exciter were replaced some years ago with solid state electronic excitation. Each unit has a newer, free-standing governor along with computerized controls and exciters. The generator floor contains a 125-ton Whiting bridge crane (Figure 45, Figure 46, Figure 47).

The control room contains three free-standing, 8.5-foot-tall control boards. Some boards have black slate face panels. Analog and digital control dials are contained within projecting housings. Boards include eight cabinets on the north, comprising plant control power; eight in the center, comprising the bench board control system; and eight in the south, comprising the main relay board.